Capitation and Integrated Health Care Systems:
Twin Challenges for Russian Health Sector Reformers

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Integrated health care systems; a concept being discussed throughout Russia and the world. A concept with three different applications and a confusing interaction with the concept of "capitation payments". The health reform debate in Russia and the NIS can only advance if greater clarity is found for these concepts, and if medical leaders are prepared for the substantial changes in provider behavior that are required with integrated health care systems fueled by capitation payments. This article explores the twin concepts of capitation and integrated health care systems, and then the leadership challenges for Russian health sector managers as they prepare for these challenges of the 21st Century.

Capitation Payments

Capitation is one of the oldest methods of payment for medical services and health care. Chinese and Mediterranean healers, over 1000 years ago, were rewarded on a per person basis for those who remained healthy. The contemporary concept has become linked with modern health insurance and is now generally defined as a payment mechanism in which health care providers are paid a fixed amount of money each month per insured person to cover specified services over a defined period of time. Exhibit 1 provides an illustration of how funds from a capitation payment could be allocated in a US integrated health care system (IHS). This capitation payment is divided among the providers of the system in ways that give them incentives to avoid delivering unneeded care. Their tools to live within the capitation rate are called "managed care protocols", and are discussed later in this paper.

Deceptively simple, per person payment becomes complex when purchasers of health services want to pay less if their group of citizens or workers are expected to be healthier, have fewer claims, are in a less risky environment or are members of a large purchasing consortium. Without the guarantee of actual service provision in exchange for this capitation payment, however, the concept dissolves to a mere "premium payment". A premium is a payment to an insurance company that can vary dramatically over time depending on whether it is based upon on average rate for the entire municipality's population (a community rate), or if it is derived from a series of graduated scales based upon actuarial data and forecasts of expected claims costs for the specific individual or class of individuals.

Glaser observes that the graduated premiums are calculated rates that will actuarially cover the costs for a particular risk group or class of insured persons. The costs, inturn, depend on the benefits covered for that class. Premium tables include several dimensions:

- *Age.* These systems always include "step rates" - that is, each subscriber is charged a higher rate as he grows older. The increases cover the higher medical costs as subscribers age. Each age may be charged a unique premium. Or, more often, subscribers are grouped: for example, persons aged thirty to thirty-nine are charged less than those aged forty to forty-nine. The interval usually occurs after five or ten years.
- *Sex.* Women were once charged higher rates than men because of their higher costs. The trend in many countries is to eliminate the difference in favor of unisex rates because of new government regulations or unfavorable publicity in the market - both inspired by women's movements.
- *Benefits.* The subscriber can choose between ordinary, semiprivate, and private hospital room coverage in return for higher rates. The basic policy may vary in coverage of certain other benefits, such as dentistry or cancer care or mental health care, but usually these are sold as separate policies with their own premium tables.
- *Cost sharing.* The private carriers offer subscribers a lower premium in each class if they are willing to pay more of the costs "out-of pocket". The structure of the premium table otherwise remains the same.

The methods of calculating rates by age and sex are similar in all countries. First, estimate the carrier's own utilization of the insured benefits by age and sex (if the carrier has enough experience data), or the average utilization in the country by age and sex (if the insurance industry or government issues data), or the carrier's expected future experience. Then estimate the cost per benefit and the aggregate cost per age-sex class. The categories with higher utilization and higher costs (such as older woman) will have higher premiums than others (such as younger men). To this "pure premium" for each category, add a "loading" - usually a standard mark up - to cover administration, marketing, and any profit. These premiums might be reduced for some classes with offsetting increases for others, according to the marketing strategy of the carrier or the political ideologies of the party in power.

In Russia, as in most of Europe and the US, private mutual insurance companies often start off trying to do for the middle and upper classes what the sickness funds do for the workers. Large numbers of people are to be covered by a simple rate structure. Everyone is charged the same, covering the probable average costs of care and administration for those social classes and that list of benefits. Benefits could be more generous than those under the new Russian Mandatory Health Insurance (MHI) funds and include services desired by the middle and upper classes, such as payment for personal care by private nurses or doctors, and private rooms and better food in hospitals, and/or better coverage of drug costs.

For most of their history, one of the oldest and largest US health insurance companies, Blue Cross/Blue Shield, tried to enroll as many people as possible and charged average rates. Blue Cross/Blue Shield often practiced "open enrollment" of individuals, accepting bad risks who might be rejected by private commercial insurance companies. Blue Cross/Blue Shield could cover these expensive persons - provided that most citizens joined and believed that the rates were reasonable. Blue Cross/Blue Shield also enjoyed special advantages: governments exempted them from premium taxes on the grounds they performed a public service and were not business firms; several state governments required that hospitals grant "The Blues" discounts from their normal charges; "The Blues" had many profitable group contracts that might cross-subsidize the individual

contracts. Similar regulatory advantages may needed to be considered in Russia and the NIS if this is a goal to attract new players into the health sector.

Integrated Health Care Systems:

The concept of "Integrated Health Systems" encompasses three different models:

1. The "All Levels of Care Model": within a single organization, all levels of medical care - ambulatory care, hospital care and in home care - are readily available to the insured person. This has been the case in nationalized systems like the UK and in Russia, and is now present in the US within private health maintenance organizations (HMOs).

2. "Managed Care Model" :
   The continuity of services among the levels of care of the system is assured by the health coordinating system's reliance on new "case management" and "clinical care guidelines"; and

3. The "Finance and Delivery Model":
   Financing functions are added in to the managed care system of services and health promotion programs. In the US, these are called Health Maintenance Organizations (HMOs).

   An essential ingredient of the success of these new organizations that combine both financing and delivery is how they relate to physicians. The new integrated system not only has a seamless system of services available to the patient, but this system is well used by physicians who have new incentives to provide services at the highest quality and lowest cost possible.

   How should such new physician incentives be explored in Russia? Perhaps Russian payment reformers can borrow positive ideas from the evolving US experience in performance based pay. A central message from the US managed care experiences is to design new system of payment that change physician incentives for care planning and care delivery.

Changing the Incentives of the Physician

The overwhelming majority of health care expenses covered by insurance relate either to physician services or services ordered by a physician. One key control point for health care cost is, therefore, the behavior of the physician. Some proposed Russian payment reform proposals could work against physician cost efficiency in four ways:

- By paying physicians only when the physicians perform services and by paying more for complicated services, the insurance plans create a financial incentive for physicians to provide more and increasingly complicated procedures.
- The typical fee-for-service insurance plan's full payment levels for in-hospital care insulate the physician from having to be concerned about the costs of "excessive" hospital usage. For years, some doctors have authorized "extra" days of expensive and unneeded hospital care when patients or their families requested them. The physicians knew that the insurance plans would pay the hospital bill. They didn't need to worry about the cost impact on their patients of using the hospital inappropriately.

  DO DOCTORS KNOW COSTS?- Doctors may not know just how much hospital services cost. In a survey done in the USA by a local HMO, for example, physicians were asked how much money one day in the hospital would cost their patients. Fewer then one out of four gave correct answers. Their insulation from hospital charges is another reason that physicians don't take costs into account when making health care decisions.

- Traditional insurance plans encourage in-hospital care rather then care in a lower cost clinic setting, because many services were paid for by the insurance *only* if they were performed in an inpatient setting. Some doctors who have been aware of this have tended to hospitalize their patients so that the patient's insurance plans will pay for the care, even though the same procedures could be safely done in a doctor's office.
- Typical insurance plans pay very well for the care of the sick, but they offer very few payments for preventive care of the well.

If Russia is not careful in its payment reforms, it will have a new system in which many significant incentives work against cost efficiency. For example, a highly competent physician finds that two different options are available in treating a patient's condition. An operation and several days of hospitalization would restore the patient to health. Or a program of rest at home, therapy, and appropriate prescription drugs would correct the health problem. Both approaches are "correct", because both have equal potential to cure the patient. The cost difference, however, will be substantial. Given the traditional insurance situation described above, the doctor has little financial incentive to avoid the operation. In addition, the patient may prefer having the surgery and the physician may welcome the opportunity for increased experience with the surgical procedure.

What can be done to change the physician's incentives, so that along with all the other factors that go into making medical care decisions, he or she will also consider the cost of that care? Capitation payment systems offer incentives to seriously consider three major options:

- Capitation payments give new economic incentives to pay for care in more economical settings, and to penalize the "wasteful" physician and patient by refusing to pay for the full cost of the care if it's delivered in an inappropriate or higher cost setting.
- Utilize special cost containment programs, like "preadmission screening" or "mandatory second opinion surgery", to actually manage the practice of local fee-for-service providers.
- Make an HMO like option available. HMOs create direct and effective incentives for physicians to practice health care cost containment.

HMOs differ from traditional health coverage in one very important respect: an HMO is *both* the insurer of care and the provider of that care - at least from the perspective that the HMO contracts with the health care provider who actually delivers the care. Dr. Paul Ellwood (founding President of InterStudy and the man who coined the term "HMO" in 1970 in the USA), often refers to HMOs as "insurance companies that practice medicine - or physicians who practice insurance." HMOs are organizations that agree to provide a comprehensive benefit package in exchange for a specified monthly rate per person covered. The HMO not only *insures* its "enrollees*",* it also *provides* the care needed through its own physician, hospitals, nurses, etc.

Because the HMO has to survive on a fixed, capitated flow of income per enrollee, there are significant financial incentives to control the costs of care. HMOs communicate that incentive to their physicians, through either financial arrangements or in their own care management system and structures.

HMO structures vary. Few HMOs are identical. Some hire their doctors. Others contract with private practice doctors who already have fee-for-service practice in the community. HMOs come in four models:

- **Staff model** HMOs hire their own medical staff. Their doctors are paid a salary, in order to avoid a financial incentive for the physician to either over-utilize or under-utilize care. The originally theory of staff model HMOs was to remove the direct and personal financial incentives from the physician's decision-making process so that quality of care became the primary determinant of whether or not a service was provided.
- **Group model** HMOs operate with multi-specialty medical groups of physicians who tend to practice in that facilities that also serve private, non-HMO patients. Group model physicians are employees/partners of the medical group, rather than of the HMO. The medical group contracts with the HMO.
- **Independent practice associations (IPA)** tend to be open-model HMOs that provide HMO benefits through a network of independent practice physicians whose main business is traditional, fee-for-service medicine. IPA HMOs generally pay their physicians on some kind of modified fee-for-service basis with the physicians sometimes receiving bonuses for cost-effective behavior and incurring financial penalties if they "over-utilize". Solo practitioner physicians who belong to HMOs usually participate through joining IPAs.

- **Network model** HMOs are a fairly flexible combination of the above models. Some combine staff and group models, for example, and other network combine group and IPA approaches.

Some HMOs pay their doctors a salary - and don't create any incentive to either over-utilize or under-utilize the health care dollar. Some pay their doctors on a modified fee-for-service basis with a portion of the doctor's fees often withheld as a "reserve" fund in case the HMO's overall expenses exceed its income. (At the end of each year, a settlement process determines whether or not the doctors receive any portion of the withheld moneys.)

Other HMOs pay their doctors on a "capitation" basic. Such HMOs pay each "capitated" physicians or clinic a pre-set "per capita" monthly payment for each enrollee. The capitation payment may be the total HMO payment for the provider. The provider can usually keep the "surplus" if the cost of caring for a patient is less than the capitation. But the provider then absorbs the "loss" if the caring for a patient (or group of patients) exceeds the capitation.

Providers on a capitation payment have a very direct financial incentive to control costs.(Some critics of HMOs believe that a pure capitation scheme also tends to create a direct short-term incentive to provide inadequate care in order to save money.) Usually, capitated HMOs also have some sort of "stop loss" reinsurance level to prevent their providers from going bankrupt due to the costs of one or two very high-cost cases.

Capitation plans vary significantly from HMO to HMO. Some plans capitate for all care. Others capitate only for primary care. Others pay for most basic care on a fee for service basis, but capitate providers for special services like chemical dependency treatment or heart transplants.

Managed Care:

How HMOs cut costs. In the US, HMOs have traditionally controlled expenses primarily by focusing on the costs associated with hospitalization. In the future, they will also focus on new ways to manage outpatient care quality and cost effectiveness. In a typical insurance plan, hospital costs run about 50-60% of total expenses. In an HMO, that number is often reduced to 40% or less. HMOs control hospital costs by:

- Avoiding unnecessary hospitalization - performing services wherever possible in a less expensive outpatient/clinic setting.
- Carefully determining lengths of stay for patients who are hospitalized. Depending on the model to some degree, HMOs tend to have professionals monitor every hospital admission to ensure that patients are discharged as soon as medically appropriate. HMOs also tend to place a high priority on "discharge planning", to help the patient with follow-up, post-discharge care.
- Negotiating contracts with hospitals or owning their own cost-effective hospitals. HMOs that achieve significant enrollment can use their market share leverage to negotiate favorable arrangements with hospitals. For example, some HMO hospital contracts are based on low cost

"per diem" payments, under which the HMO pays a flat daily charge for hospital service regardless of the severity of the patient's condition or the number of services needed.

The results of the HMOs' focus on hospital cost control is that HMOs tend to average a much lower level of hospital usage than a typical insurance plan. In an area where the typical insurance plan would expect to pay for 700 to 900 inpatient days per 1000 covered lives, a typical HMO would probably incur between 250 and 300 inpatient days per 1000 enrollees. When just one average hospital day costs more than $900 in many areas of the US, it is easy to see what kind of positive rate impact HMO hospital controls can have.

HMOs do more than control hospitals costs. They also control physician practices and testing expenses. The techniques used to accomplish these objectives vary, based on the model of HMO involved. Some IPA model HMOs create "standards of practice per diagnosis" and monitor the performance of their physicians relative to those standards. Others rely on peer review and medical management (staff model HMOs) or on pure financial incentives (capitated HMOs).

A single example of an IPA HMO physician control technique would be to monitor the number of "callbacks" done by a primary care physician. An IPA might set a standard of 1.3 visits for a "cold/sore throat" diagnosis category. That means that the physicians should average no more than 1.3 visits per patient for all patients with that diagnosis. If a given physician within that HMO averaged two visits per patient for the targeted diagnosis, the IPA would study the physician's practice to make sure that the doctor wasn't setting up too many unnecessary second visits for situations that either didn't require a second visit or for situations that could have been handled over the telephone. Physicians with excessive callback of patients for additional visits, might be warned, suffer financial penalties, or even be removed from the HMO.

Other similar controls can be imposed by an HMO in physicians' use of diagnostic tests or referral procedures. In the case of an IPA plan that contracts with providers on a form of fee-for-service basis (rather than hiring them or using a capitation approach), the IPA will probably also impose limits on the contracting doctor's fee levels, and then will tie even that limited fee-for service reimbursement to some form of risk arrangement based on the physician's own practice or the overall utilization of the HMO.

Russia Does Not Need to Repeat US History:

There is a series of important concepts which need to be considered in the transition from traditional fee-for-service healthcare to integrated healthcare delivery. Modeling these concepts can provide a framework for Russian health care leaders to (a) understand the critical issues they will face, and (b) to select the appropriate strategies for moving along the path to full integration.

The transition in Russia and other countries to operate more of health care in integrated delivery systems is complex and dynamic. Four factors need to be addressed to gain conceptual clarity:

--- What is integration?
--- Stages of Delivery System Integration
--- The Dynamic Model of Provider Integration
--- Critical Success Factors

What is Integration?

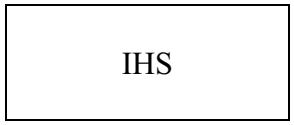
"Integration" is the most overused and possibly the least understood of any term currently being used by the Western health care industry over the past few years. In the US, integration has come to mean any situation where there is an entity set up to employ physicians, allow joint contracting between the hospital and physicians, or any number of other joint hospital-physician effort. The legal and structural aspects of integration have often taken center stage. However, this common usage of integration provides a great disservice as it suggests that simply by setting up new legal structures or acquiring a health care delivery component creates an integrated delivery system.

Integration is *not* a legal or an organizational concept. It is *not* simply a matter of who owns whom or the development of any specific structural model. Integration is an economic and operational concept within which various components of the health care delivery system have the same interest and objectives. To achieve full integration, several important service delivery characteristics must change. Incentives must be aligned between all components of a delivery system. Integrated delivery systems must have the ability to share risk among providers and manage that risk. Eventually under integration, the clinical and operational aspects of medical practice must be significantly modified.

Under this definition, integration is difficult. It requires a fundamental altering of the economic and competitive structure of a delivery system. This is most easily understood by reviewing an example of the practice of medicine between and among physicians under a standard fragmented private practice of medicine and that of more integrated system. Russian polyclinics now seem positioned in the middle of this continuum. Some polyclinics are considering how to become "unfrozen" into a loose collection of individual physician practices. Others are evaluating how to transform themselves into a multy-specialty group practice. Key features of the two extremes are shown in Exhibit 2.

Exhibit 1
Typical Capitation Arrangement

MONTHLY PREMIUM
Commercial
($80.00 pmpm)



Source: Ira Meiselman, City of Hope, California, February, 1994.

Exhibit 2

Differences between Fragmented Private Practice and Collegial Group Behavior

Fragmented Private Practice	Collegial Group Behavior
Professional Practice Model: • Individual professional relying on one's training and experience, determines appropriate care methods and paths	• Physicians work with each to determine most appropriate clinical practices and methods • Formal ambulatory mechanism to discuss cases and care patterns • Numerous protocols, standards of care, formalities, etc. • Formally test and critique diagnostic and therapeutic regiments - once chosen, monitoring and correction of non-compliance occurs • Goal is to reduce clinical variation
• Management of care passes with each referral	• PCP (or other care manager) involved in managing care throughout the system • No "secondary referrals" without PCP involved and knowledge • Frequent incidence of interdisciplinary care
• Each physician involved in the core process does a complete work-up	• No independent work-up - rely on the expertise of your partners
Care processes focus on individual incidence of care	• More longitudinally-focused care processes

Source: Voluntary Hospitals of America (VHA)

Based on US research, collegial physician behavior is most frequently found in the large, multy-specialty group practice (e.g. Mayo Clinic or Kaiser Permanente) rather than in solo or small, single specialty office practice. The collegial medicine as practiced by Mayo and certain other large groups is more sophisticated - and ends up less costly and with more predictable outcomes. For example, physician-to-physician integration typically involves the adoption of standardized practice mechanisms, such as clinical pathways, to manage patient referral and outcomes.

However, this is not the only form of integration. Integration can take many forms. It is also evident that the various forms of integration produce different types of value to the integration effort depending on where one is in the overall process of integration. There are at least five different forms of integration in US:

- Hospital to hospital
- Physician to hospital
- Provider to insurance company
- Physician to physician
- Delivery system to purchaser and/or community

These integration approaches are illustrated in Exhibit 3, which describes their type of contribution to the overall integration effort. On the far left-hand side, the players work together to manage utilization. As one move to the right, insurance companies and providers work together to manage risk.. As physician to physician integration occurs, the delivery system begins to manage patient care. At the far right, when the delivery system's incentives are aligned with those of the community and healthcare purchasers, the system begins to manage health care outcomes to the expectations of the purchaser/community.

Exhibit 3
Forms of integration

Physician-Hospital	Insurers/HMO/Providers	Physician-Physician (Clinical Integration)	Purchaser Delivery System
• Hospitals can provide capital and management expertise to facilitate physician integration • Can force excess facility capacity out of the incentives among providers • The hospitals can facilitate /create MIS capabilities for integrated care delivery • Develop common culture	• Can provide system reporting capabilities • Can provide system resources to determine what adds value to the enrolled population • Insurers can provide capital and management expertise • Marketing initiatives can be coordinated • The insurer can facilitate/create specific MIS capabilities for integrated care delivery	• Can provide community benefit • This is the only mechanism for optimizing physician mix • Learning organizations - Clinical practice is communicated among physicians Care is organized -Referrals do not lead to the passing of patient management - Practice of medicine is impacted "Lone ranger" care replaced by collegial care -Institutionalized in medical education **Reduced Clinical Variability**	• Requires maximum accountability • Invests in health status • Can deal with long-term (longitudinal) viewpoint • Forces debate regarding treatment and coverage issues • Society may not be able to purchase; unable to make treatment and coverage decisions: - Too pluralistic (e.g., Oregon) -Must be done by providers **Forces Trade-Offs**

Manage Utilization **Manage Risk** **Manage Care** **Manage Outcomes**
Pu rchaser/Community
Expectations

Less
Sophistication

More
Sophistication

Most investment in US integration has focused on the two far left forms of integration - hospitals integration with their physicians and HMOs and insurance companies with physicians and hospitals. These integration effort can provide important value to set the stage for further integration. At this early stage, hospitals and HMOs can begin to assist physicians in learning how to:

- Address managed payment situation, as a capitation payments
- Live within financial constrains of early HMO arrangements
- Move as much care as possible out of the expensive in-patient load
- Interact with each other in different ways in the new environment of the 1990s

However, to achieve real value in making medical practice more efficient, less costly, and with a higher predictability of quality outcome, the forms of integration at the far right hand side of the chart are necessary. Only by modifying the relationship between and among physicians can care be managed. The role of hospitals, HMOs and insurance companies in these later stages of integration becomes one of primarily using their balance sheets and management expertise to facilitate the right types of integration between physicians to bring about cost-effective, quality patient outcomes.

Stages of Delivery System Integration

Russian health care leaders have an opportunity to save time and resources in their move toward a new generation of integration. Russia should not try to drive toward a fee-for-service model with fragmented providers and purchasers of care . Does the current version of an integration system have to be blown-up for it to the reassembled or can it be repaired in place? Only Russians should decide, but certain characteristics of a 21-st century system should be considered during this decision. The most likely model for the 21-st century is the stage four referred to as “Accountable Care”.

Recent research in the US isolates important themes or lessons learned as organizations migrate through these stages of integration:

- In each stage, certain competencies are developed and provide the foundation for future transitions.
- In each stage, certain processes and functions must also be discontinued or radically changed.
- Each stage builds on previous stages but discards certain incentives, payment mechanism and structures along the way.
- The objectives and overall culture of the organization changes at each stage’s boundary.

Each stage may actually include several smaller transitions, but the greatest challenges are typically faced at the borderline between the major stages.

There are four delivery system integration stages:

Exhibit 4: Stages of Delivery System Integration

Fee-For-Service and Discounted Medicine	Managed Payment	Organized Care	Accountable Care
Conflicting "Shell Game" Contracting			
Subspecialty Medicine Reducing Inpatient Capacity			
Fee-For-Service Extensive Discounting			
Entity Behind Business Risk			
None Hospital to Hospital			
None Functional Management			

The **Fee-For Service/Discounted Medicine Stage** above describes the early effort most US hospitals have undergone to deal with discounted Fee-For-Service (FFS) managed payment arrangements. Despite the emergence of early HMOs, virtually all payment mechanism are still fee-for-service,

and institutions and providers make most of their money under sub-specialty medicine. The key to success is to have good information systems at each entity's level; there are no incentives to have a multy-entry information system.

Horizontal, hospital-to-hospital integration efforts are attempted in an effort to begin the process of retooling in-patient capacity to meet community needs. However, the overall delivery system is not managed as a whole as virtually all management is restricted to the individual entity level. Most US hospitals have now overcome the challenges of this stage. The real challenge is the movement to the managed payment stage, as many marketplaces no longer will allow institutions in the fee-for-service stage to thrive.

Exhibit 5: Stages of Delivery System Integration

Fee-For-Service and Discounted Medicine	Managed Payment	Organized Care	Accountable Care
Conflicting "Shell Game" Contracting	Initial Alignment of Financial Incentives to "Do the Right Thing"		
Subspecialty Medicine Reducing Inpatient Capacity	Initial Balancing of Capacity Learning to Live with Risk		
Fee-For-Service Extensive Discounting	Discounted FFS with Risk Withholds		
Entity Behind Business Risk	Transactional and Risk Management		
None Hospital to Hospital	Hospital or HMO to Physicians		
None Functional Management	Controls		

In the **Managed Payment System,** delivery systems have begun to align financial incentives in relatively elementary ways to incent providers to "do the right thing". The focus of the delivery system in this stage is typically learning to manage a risk-based system with the financial constraints of early stage managed care arrangements. In addition, delivery system struggle with early efforts to balance the production capacity of the various components in a still fragmented delivery system - adding primary care wherever possible in order to achieve overall delivery system balance.

These payment mechanism are still primarily discounted fee-for-service despite the predominance of managed care (HMO/PP) insurance products. However, these discounted fee-for-service mechanism have the features of overall provider risk-sharing with extensive use of risk pools and hold-backs. Key information systems requirements emphasize effective transactional systems for the processing of claims and tracking patient encounters in order to manage risk. Hospitals and HMOs attempt to align physicians with their delivery systems, which often becomes their key integration focus.

Exhibit 6: Stages of Delivery System Integration

Fee-For-Service and Discounted Medicine	Managed Payment	Organized Care	Accountable Care
Conflicting "Shell Game" Contracting	Initial Alignment of Financial Incentives to "Do the Right Thing"	Aligned Among Providers	
Subspecialty Medicine Reducing Inpatient Capacity	Initial Balancing of Capacity Learning to Live with Risk	Collegial/Organized Care	
Fee-For-Service Extensive Discounting	Discounted FFS with Risk Withholds	Capitated	
Entity Behind Business Risk	Transactional and Risk Management	Connective Longitudinal	
None Hospital to Hospital	Hospital or HMO to Physicians	Physician to Physician	
None Functional Management	Controls	Culture	

In the **Organized Care Stage**, delivery systems begin to look like consolidated, single entity organizations. For the first time, incentives begin to become aligned throughout all the provider components of the delivery system as most of the payment mechanism become truly capitated. The focus of delivery system efforts at this stage is on modifying the relationships between and among physicians in order to achieve a collegial practice of medicine. Information systems efforts are critical at this stage to achieve productivity between and among the various providers and financial mechanisms, as well as to deal with medical care on a more longitudinal basis. Where prior system management was based on financial controls and monitoring, effective management at this stage seeks the development of a common culture among all the components of the delivery system. True integration is attempted for the first time in the Organized Care Stage.

Exhibit 7: Stages of Delivery System Integration

Fee-For-Service and Discounted Medicine	Managed Payment	Organized Care	Accountable Care
Conflicting "Shell Game" Contracting	Initial Alignment of Financial Incentives to "Do the Right Thing"	Aligned Among Providers	Aligned with Purchasers and/or Insurer Greater then One Year
Subspecialty Medicine Reducing Inpatient Capacity	Initial Balancing of Capacity Learning to Live with Risk	Collegial/Organized Care	Accountability Informed Trade-Offs
Fee-For-Service Extensive Discounting	Discounted FFS with Risk Withholds	Capitated	Don't Understand the Question
Entity Behind Business Risk	Transactional and Risk Management	Connective Longitudinal	Expert-Knowledge
None Hospital to Hospital	Hospital or HMO to Physicians	Physician to Physician	"Community of Providers"
None Functional Management	Controls	Culture	Values

In the **Accountable Care Stage,** all delivery system efforts are focused on accountability to the purchaser of the health care services and/or the community in which the delivery system competes. Incentives have been aligned from the providers through the financing mechanism all the way through to the purchasers of care. This allows the informed purchaser the ability to make informed trade-offs on delivery mechanisms, service levels and costs of care.

Overall effective delivery system management is that which has inculcated a set of common values into all employees and partners in the delivery system and has aligned those values with the values of the individual patient and purchaser of care.

The relationship between the purchaser of care and the provider of care has involved to the stage where it becomes difficult to describe the overall payment mechanism to the providers - the purchaser/community makes all investment decisions. Nobody is compensated based on the amount of services they provide, and all employees in the health care provision network receive fair compensation for the value they provide.

Information systems have involved to the level necessary to place the highest degree of scientific and medical knowledge, as well as all agreed-upon protocols of care quickly available to the individual clinician at the point of care - expert analysis systems have replaced the former transactional systems in such a delivery system.

A Dynamic Model for Delivery System Integration

By considering the observed stages of delivery system integration, a dynamic model for delivery system integration is achieved. This model suggests that an accurate reading of the local oblast market stage and its direction identifies the requirements for delivery system integration at that point in time. In fact, the US study concluded that a change in the market leads to virtually all transitions required of delivery systems for integration. For example, a market moving from Stage I to Stage II forces a delivery system to develop the capabilities and characteristics of the Managed Payment Stage of integration to be successful. However, at this point in time, most of the sophistication of the Organized Care Stage would not be appreciated by the as yet unprepared marketplace - and may make the transition to a more formal (less pluralistic) structure of the Organized Care Delivery System not possible or feasible.

The interplay between market sophistication and required delivery system capability is outlined in Exhibit 8.

Exhibit 8:

A Dynamic Model for Delivery System Integration

Stage 1	Stage 2	Stage 3	Stage 4
• **Convenience** • **Choice** • **Pluralism** • **Charges irrelevant** • **Beginning discounting** • **Beginning of direct purchaser involvement** • **Plan costs uncontrolled** • **Brokers and buyers creating many new contract forms**	• **Total cost of care matters** • **Significant market power of purchasers** • **Consolidation of buyers**	• **Market defines price** • **Excess capacity eliminated from payments** • **Expectations regarding clinical utilization discussed with payers**	• **Accountable for quality, service, access** • **Full purchaser market power**
Fee-For-Service and Discounted Medicine	Managed Payment	Organized Care	Accountable Care
• Fee-For-Service • Professional model • Professional service, hospitals, and insurers are revenue centers • Clinical program driven • Build access/deny no one • Demand frequently exceeds available supply • Revenue enhancement studies	• Begin to establish financial incentives to align interest: - Begin establishing risk sharing pools - Initiate joint contracting efforts • Excess inpatient capacity close • Create vision for delivery system • Strategically reactive • Transactional information systems	• Aligned incentives among providers forces organization changes - Formalized risk sharing - Risk through capitated payment • Develop collegiality among physicians in order to reduce clinical variation • Balance beds, technology numbers	• Align the incentives of all delivery systems components and the purchasers • Expand the time horizon for viewing the delivery system to time periods greater then one year • Focus on longer term clinical impacts • Expert/knowledge information systems • Purchaser-delivery

• Cost control begins to be significant in hospitals • Initial physician recognition that limits to income growth may occur • Growth of billing bureaucracies to manage the "battle of the forms" • Cost control via days/1,000 population and limits to admission results in significant excess inpatient capacity	• Initial physician-hospitals integration • Initial provider-insurance/HMO integration	of physicians • Transform vision into a common culture • Initial longitudinal information systems • Physicians/hospitals/insurer integration • Short-term strategically reactive/long-term proactive	systems integration • Provider-Payer-Buyer integration

The Dynamic Model for Delivery Stages of Integration is segmented on the basis of the degree of integration within the delivery system. The first stage is the traditional Fee-For-Service and Discounted Medicine stage in which limited integration exists. The second stage, Managed Payment, involves the consolidation of buyers and their subsequent increase in purchasing power.

This stage begins to align the financial incentives of providers and purchasers as the total cost of care increases in importance. The third is Organized Care and is characterized by formalized risk sharing through capitated payments. Organized Care maintains a high degree of physician/hospital/insurer integration. The fourth and final stage of integration is Accountable Care and involves the highest degree of integration between the purchaser and the delivery system through the alignment of incentives and focus on long-term impact.

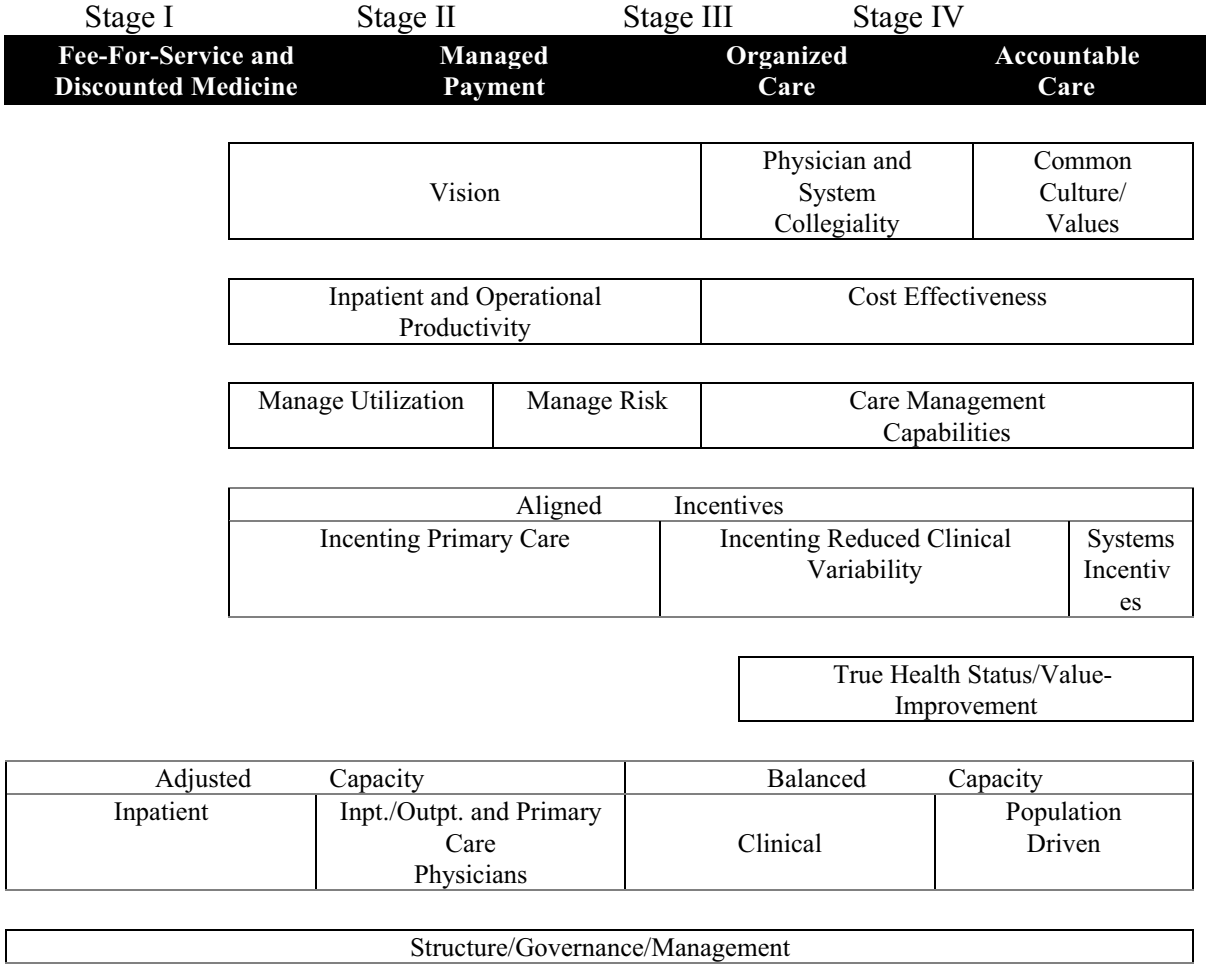
Critical Success Factors

The discussion to this point has been rather general and conceptual. The real question is how can delivery system management truly achieve the transition to the next stage of integration?

The specific effort, tactics and strategies necessary to achieve the various transitions involved in the integration are different at each stage of integration. These various tactics and strategies which have proven successful in the US can be grouped into a limited number of "critical success factors" which can be effective in driving various integration efforts. The critical success factors relevant at each stage of integration are outlined on Exhibit 9.

Exhibit 9:

Our Research has Identified a Number of Critical Success Factors Which Change as the Market Develops



Pluralism of Options	Pluralism and Shared Control	Consolidated Organizations	New Organizations

Medical Leadership	Clinical Leadership

Functional and Entity Management	System Management and Accountability	Clinical Accountability

Decentralized Capital	Mixed Capital Users	Redirected Capital	Community Capital

Each of the critical success factors outlines a set of core capabilities which must be developed at that stage of integration and which will be built upon in further stages of integration. These core capabilities are stage-specific. For example, it is necessary to develop a common vision between the hospital, the physicians and other components of the delivery system to successfully transition to the Managed Payment Stage. It is also necessary to have a common vision (although frequently a different common vision) to transition to the Organized Care Stage. However, in the Organized Care Stage, vision is no longer sufficient - and a degree of collegiality among the providers is necessary to resolve successfully the challenges inherent in the Organized Care Stage. Once reaching the Accountable Care Delivery System Integration Stage, collegiality is still required but is not sufficient - at this point, common culture and values are necessary for success. This process of building on core capabilities exists throughout most of the key success factors identified. In each of the horizontal bars shown on Exhibit 9, certain capabilities are developed in the early stages and then are built upon in later stages of integration.

Twin Concepts as Prerequisites to Success: Underwriting and Care Management

With a lethargic economy, Russian health care providers and insurers can not hope to expand their economic nor technological strength without working with such well designed and well managed integrated healthcare systems (IHSs). Two tools, however, are prerequisites for the success of these IHSs:

1) Modern “underwriting”, managing the revenue side of the equation, and
2) modern “care management” systems which help manage the costs side of the equation.

New capitation payments to the IHSs will drive Russian medical managers to embrace these twin tools quickly and creatively.

Modern Underwriting:

The new Russia does not yet have many health sector "actuaries" or "underwriters". The Soviet system had little need for such mathematicians or scientists focused on differential risk and use by demographic class. The Soviet system was supposed to be classless, all had equal access to the same services at no "premium" cost, so why differentiate use and cost experiences? The new Russia, with its penchant for more choice, more competition, and a greater reliance on market based prices, needs to become more familiar with actuaries, underwriters, and underwriting.

Underwriting Functions:

In Russia, as in the US, managed care contracts will increasingly involve risk sharing with participating providers, making providers an integral part of the entire financing and care management arrangements. One area that is frequently overlooked by providers in the evaluation and management of managed care contacts is the "underwriting process". While many providers may be willing to accept insurance company's judgments on underwriting, there may be benefits to becoming more familiar with how risks are selected and having an input into the underwriting process.

Underwriting is defined as the process by which an insurer determines whether or not, and under what conditions it will accept an individual or group for insurance coverage. Careful underwriting policies and practices are an important determinant of success for insurance firms, including firms involved with managed health care. The next paragraphs outline the basics of health underwriting and suggests areas for provider involvement. While one would not expect most providers to start with much more than a knowledge of the basic functions of underwriting, working with managed care companies will increase their sophistication in underwriting and benefit the managed care plan generally.

Underwriting functions

The four basic functions of underwriting are (1) to be involved with the development of contracts that permit a reasonable determination of income for each participant, (2) to set premiums that account for contract and enrollment risks, (3) to establish standards to assure that enrollment represents a cross section of risk, and (4) to monitor the results of the underwriting program.

Contract Development with Risk:

From the perspective of the provider, the important elements of managed care contracts are the method of payment, the extent to which risks are accepted in exchange for these payments, and of course, the rate of payment. Methods for provider payment vary along a continuum of risk bearing from fee for service, to per diem, to per episode of treatment (e.g., diagnosis related group [DRG]), to per time period (e.g., capitation). While traditional fee for service payment leaves the provider only at risk for the variance in the difficulty involved with performing a service, capitation involves a much wider set of risks, including the risks associated with the health status of enrollees.

Managing the extent to which risks are accepted in exchange for payments involves defining the services that are expected to be delivered to enrollees, and any sharing of risks among parties to the managed care contract. Defining covered services is common to any insurance contract. Defining risk sharing in managed care contracts may involve recognition of services to be delivered by each party, overall financial results, and the incentives and opportunities for shifting risks among parties. An important aspect of risk sharing is the assurance of contract incentive compatibility among parties. In particular, risk sharing between physicians and hospitals and between primary care physicians and specialists must be such that incentives for admission or referral do not lead to excessive use of high cost services.

The result of such new "performance based contracting" should be a set of agreements that permit reasonable determination of income for each participant, at a given level of premiums paid by enrollees, a given mix of enrollees, and a system of monitoring results. The further along the continuum of risk bearing agreed to by providers, the greater the need for providers to extend their participation beyond the initial contracting process to additional underwriting functions.

Premium setting

Underwriting is an important aspect of pricing in managed care due to the relationship between the characteristics for individuals and groups enrolled in an insurance plan and the quantity and prices of services that are expected to be consumed.

Premium setting requires selecting both a method of payment and specific prices. The majority of health maintenance organizations (HMOs) have sought to use community rating, where all accepted enrollees pay the same premium, or adjusted community rating or community rating by class, where premium differences are permitted only on the basis of factors such as regional medical cost differences or aggregate enrollee demographics. Under a system of community rating, clear choices can be made to accept loose underwriting standards at high premiums, or to accept more restrictive standards in exchange for lower premiums. In Russia, with several of the new voluntary insurance companies, alternative to community rating methods is to use experience rating where previous use rates augment other group characteristics in determining premiums. While Russian providers involved with managed care contracts might not want to be involved with pricing per se, they would want to be sure that premiums are set in accordance with accepted risks, and that premiums are sufficient to cover provider capitation and any excess costs, such as referral fees and reinsurance.

Establishing premium rates that are insufficient to cover the costs of appropriately servicing a group may lead to consumer dissatisfaction with a plan. Dissatisfaction with a plan, in turn , may translate to dissatisfaction with providers that are associated with a plan, damaging any marketing gains that may have been hoped for by involvement with a managed care plan. Providers in managed care are viewed as partners in the plan and should therefore be concerned that premiums are sufficient to cover not only their fees, but the entire costs of delivering a quality health plan.

Underwriting standards

Setting and applying underwriting standards involves developing criteria to be used by the Integrated Healthcare System (IHS) to evaluate the risks involved with accepting an individual or group for health care coverage, and then deciding whether to accept them and what premium to charge. Under a very narrow definition of underwriting, setting and applying standards for acceptance of risks is the key function of underwriting. Failure to use underwriting standards has been identified as a common operational problem in managed care organizations.[4]

The most clear and unique contribution of specialists in underwriting is the development of systems to evaluate risk. Underwriting systems may be computer based, numerical, or judgmental. With any type of system, characteristics of individuals and groups are used to determine the risks associated with health care risks include: age, gender, occupation, location, health status, and habits.[5] Group characteristics associated with health care risks include group size; age, gender, and marital status composition; occupation; location(s); persistency; permanency; and spread of risk. Information on all of these characteristics and others may be available to underwriters, and to use of computers can aid in determining the impact of each characteristic on a statistical basis.[6] Russian managers must become more familiar with these concepts and tools to thrive in the 21-st Century.

The development and application of underwriting standards lead to the grouping of applicants into risk classes. Comparing risk classes to contracts allows the underwriter to assign a premium to each applicant. Under community rating there is essentially only one risk class, and the underwriter's job is to assure a spread of applicants to realize the single targeted level of risk and premium. Under more complicated rating systems, the underwriter must assign applicants to one of a set classes. Under the extreme of pure experience rating, each applicant is its own class and the basis for premium setting is past experience. As with pricing, providers are not likely to be party to the initial development of underwriting standards or much of their application, but they should be aware of the process, and have input into the strictness of their application. Agreement upon standards for enrollment permit providers to fully understand and manage the risk involved with managed care.

Monitoring results

The ability of IHSs and involved parties to underwrite with accuracy depends upon the initial development of sound contracts, premiums, and underwriting standards, and the refinement of these processes. Growth and continuing acceptance of underwriting results depends upon the evaluation of results. Appropriate information systems to monitor results and provide information for refinement are therefore necessary components of effective underwriting. On the front-end of underwriting, recent advances in computer technology, and in particular expert systems, have given underwriting more tools for evaluating risks, although considerable human judgment is still required.[7]
On the back-end of underwriting, information systems designed only to report financial information for a managed care firm may be insufficient to address underwriting concerns. Information systems that address utilization of services and maintain the ability to attribute utilization to specific contracts are necessary to produce information for managing underwriting and for fully evaluating risks.

Care Management:

No matter how well the premium or capitation rate is defined and negotiated, however, the health care providers and the IHS must find sensible ways to live within their financial constraints. To safeguard patient's rights to good care and outcomes, and for the providers to receive fair compensation for their services, new systems and attitudes toward "care planning" and "care mapping" will be important in the new Russian health sector. Care planning will need to be more than a day-to-day set of discussions by doctors and nurses about treatment regime. The patient's entire course of treatment, pre and post-hospital, a patients' pre- and post-polyclinic encounters must be carefully planned in advance and managed throughout the episode of treatment. While each person and patient is unique, research has shown that their disease and recovery patterns have sufficient similarities that they can be defined or "mapped-out" out with a reasonable degree of probability. This advance planning of when and how diagnostic and treatment interventions are to be most cost effectively pursued is the essence of 21st-century "managed care".

In Russia, as in the US, desired clinical outcomes can be achieved at reduced costs by continuously challenging traditional ways of diagnosis, treatment and rehabilitation, and then having interdisciplinary teams of doctors and nurses developing new "care maps" through the maze of clinical and economic judgments. In the US, HMOs are moving from the first and second stage utilization review to third and fourth stage managed care as fully integrated systems of service that are motivated to improve the quality and cost effectiveness of care by capitation payments and open accountability to the public via published "report cards" on cost and quality. The "care maps" or "anticipated recovery paths" (ARPs) represent a bold new initiative in care management being promulgated by 21st-century HMOs. Interdisciplinary teams of doctors, nurses and other health workers are empowered to redesign each step of the care process, from pre-admission lab tests to day-of- admission registration processes, to day-of- surgery food, to early ambulation after surgery through discharge planning for early discharge to the patient's home or special rehab facility. Each decision about the ideal treatment plan for this particular type of patient and disease is charted in forms such as appended to this article. Daily interaction with the patient is plotted against the ideal; variations are noted and retrospectively reduced by reviews conducted by specially trained care management nurses and doctors. Such methods are reducing hospital stays in the US by 20-30% and resources consumed per stay by 15-25%.

Reviews in the Kaluga Oblast of Russia showed that 30-40% of most days of care could be eliminated by such processes and with improved diagnostic equipment and skills. The resultant savings could be used to secure new equipment, added salaries and better continuing medical education.

New Mindsets and Management Needed:

These concepts of "capitation" and "integration" are closely related. They both require Russian health sector leaders to use new strategies, systems and information to manage the financing and delivery of health care services during the early years of the 21st Century. Important attitudes that will need to be encouraged are:

* open to innovation, new ways to define and then solve problems of resource scarcity;
* acknowledge value of interdisciplinary teams of medical and economic workers to develop new care management strategies;
* desire to rely more on fact based strategic planning and decision making;
* active pursuit of cost accounting to understand actual costs of care and to conduct insurance risk modeling;
* interest in reporting actual experiences of service use and unit costs to the public and to policy makers so that all parties understand the performance of local, integrated health care systems and new medical insurance programs.

These leaders must also develop skills and knowledge about at least the following:

* costs per unit of service and per person
* per capita charges and premiums
* utilization review and quality controls
* using "anticipated recovery paths" to manage the process of care to achieve outcomes, and
* continuos process improvement to increase cost effectiveness.

New management training programs, new curricula, new faculty, new course materials, new reference texts and practical case studies will all be needed to develop these needed attitudes and skills. This is the challenge of the new trainers for 21st Century Russian Leaders. This also is the challenge of Russian health sector policy reformers.

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Asthma

HEALTH ONE UNITY HOSPITAL
Emergency Department

Chief Complaint: Asthma
Expected LOS: 30 Minutes - 3 Hours
Admitted per:_____
Date:_____ Time:_____
LMP:_____ WT:_____

Anticipated Recovery Path
Urgent_____ Allergies:_____
Emergent_____ Present Medications___ _____
Scheduled____ _____
Chronic Illness:_____
_____

Nursing Interventions: Any deviation from normal must be documented on the nursing progress record

15 Minutes	One hour	Two hours	Three hours
Time: Presenting ____ History and Precipitating events_____ _____ _____ Time: ____ Assessments Per Standard: A. T, P, R, BR_____ B. Alert __Yes __No C. Orient: time, person, Place, situation __Yes __No D. Skin: color_____ warm_____ dry_____ E. Normal home treatment:_____ _____ Quantity used:_____ _____ F: Quality of respiratory effort (circle) regular, full, labored,	Time: Document ____ response to any nursing intervention: _____ _____ _____ _____ _____ Time: ____ P, R, BR ___ _____	Time: Document ____ response to any nursing intervention: _____ _____ _____ Time: ____ P, R, BR____ _____	Time: P, R, BR ____ ____ _____ Disposition Time: Admit: ____ _____ Report called to: _____ By Whom: _____ Discharge Time: _____ _____ A. Reinforce asthma pamphlet __Yes __No B. Reinforce inhaler use __Yes __No C. Reinforce ateroid use __Yes __No D. Reinforce fluids, rest

shallow, rapid. G: Accessory muscles used: __Yes __No H: Lung sounds:_____ _____ I: Recent URI __Yes __No Sputum produced __Yes __No Describe:_____ _____			__Yes __No Verbalized understanding __Yes __No RN Signature _____

New, revised asthma APR, 1993. LOS, Length of stay; LMP, last menstrual period; WT, weight; T, temperature; P, pulse; R, respirations; BP, blood pressure; URI, upper respiratory infection; SOB, shortness of breath; c, with; Tol, tolerate; HOB, head of bed; s, without; neb, nebulizer; RR, respiratory rate; a, before; p, after; CBC, complete blood cell count; ABGs, arterial blood gases; SS, social services; PHN, public health nurse; peds, pediatrics.Chief Complaint: ASTHMA
Expected LOS: 30 minutes - 3 hours

Patient Name_____ Allergies_____ Physician_____RN_____

NURSING ACTIVITY	30 MINUTES	1 HOUR	2 HOURS	3 HOURS
	1. Assessment per ED standards: a. Auscultation lung sounds b. Respiratory rate c. Quality of effort d. Use of accessory muscles. e. PPT events and duration of symptoms. f. Recent URI. g. Identify patient's normal home tx and how much used before coming to	1. Note responce to nursing intervention 2. Reassess respiratory status._____ 3. Pulse, respiratory status after medication and PRN.		

	hospital. h. PO. I. Peak flow. 2. TPR and BP every 1 hr PRN		
Activity	Bedrest-HOB 90 or position of comfort._____		activity as patient tolerates without DOE or return of sx; tolerate HOB without SOB.
IV	Per MD order anticipate D^5W TKO_____		
Medications	1. Stable, age appropriate initate asthma protocol. 2. Unstable pt. or those not fulfilling. criteria-orders per. MD. Anticipate: a. Albuterol neb. b. Theophilline, steroids, epinephrine bolus/drip 3. Oxygen per standard	Repeat neb. per MD order_____	
Treatments	1. Baseline PO- record 2. Peak flow before and after neb.-record	Repeat PO after neb._____	
Lab	CBC, theophylline level anticipate ABGs	Lab results on chart within 1 hr	
X-ray			
Consult		PMD	
D/C planning	Anticipate patient's needs for ancillary services: respiratory, SS, PHN etc home neb. unit		Arrange refferals ancillary services as appropriate.
Teaching		Access patent's knowledge of asthma triggers, use of danger signs,previous need for steroids.	1. Reinforce asthma teaching pamphlet 2. Reinforce inhaler/steroid use 3. Reinforce fluids, rest.

Original, unsuccessful asthma ARP, 1991. PPT, Precipitating; URI, upper respiratory infection; tx, treatment; PO, pulse oximeter; TPR, temperature, pulse, and respiration; BP, blood pressure; PRN, as needed; HOB, head of bed; DOE, dyspnea on exertion; sx, symptoms; SOB, shortness of breath; D^5W, dextrose 5% in water, TKO, to keep open; pt., patient, neb., nebulizer, CBC, complete blood cell count; ABGs, arterial blood gases; PMD, private medical doctor; D/C, discharge; SS, social services; PHN, public health nurse.